CLAIMS

1. A manufacturing method for a metal electrode whose structure consists of multiple layers of one or more types of metal, comprising:

a first print step for printing a first photosensitive substance that includes a mixture of a first metal, a photosensitive resin, and a solvent to form a first layer;

a first dry step for drying the first layer;

a first exposure step for producing a predetermined pattern of a first region having a high solvent absorbency and a second region having a lower solvent absorbency than the first region by exposing the first region;

a second print step for printing a second photosensitive substance that includes a mixture of a second metal, a photosensitive resin, and a solvent to form a second layer on the first layer, so that a region of the second layer on the first region converts into a third region having a low solvent content and a region of the second layer on the second region converts into a fourth region having a higher solvent content than the third region;

a second dry step for drying the first and the second layers so that flows of the solvent from the first and the fourth regions to the third region occur;

a second exposure step for exposing the second layer so as to leave the third region of the second layer in the following development step;

a development step for developing the whole of the first and the second layers so as to leave the first and the third regions as an electrode pattern and to remove the remaining regions; and

a baking step for baking the electrode pattern to shape the metal electrode.

2. A manufacturing method for a metal electrode whose structure consists of multiple layers of one or more types of metal, comprising:

a first print step for printing a first photosensitive substance that includes a mixture of a first metal, a photosensitive resin, and a solvent to form a first layer;

a first dry step for producing a predetermined pattern of a first region having a high solvent absorbency and a second region having a lower solvent absorbency than the first region by heating the first region;

a second print step for printing a second photosensitive substance that includes a mixture of a second metal, a photosensitive resin, and a solvent to form a second layer on the first layer, so that a region of the second layer on the first region converts into a third region having a low solvent content and a region

of the second layer on the second region converts into a fourth region having a higher solvent content than the third region;

a second dry step for drying the first and the second layers so that flows of the solvent from the first and the fourth regions to the third region occur;

an exposure step for exposing the whole of the first and the second layers so as to leave the first and the third regions in the following development step;

a development step for developing the whole of the first and the second layers so as to leave the first and the third regions as an electrode pattern and to remove the remaining regions; and

a baking step for baking the electrode pattern to shape the metal electrode.

3. The manufacturing methods for the metal electrodes according to Claims 1 ~~and 2~~, wherein

in each of the second dry steps, the first layer and the second layer are dried by rapidly heating the layers so that an ambient temperature is increased at a rate of 10 to 40℃/min.

4. The manufacturing methods for the metal electrodes according to Claim 3, wherein

in each of the second dry steps, the first layer and the second layer are dried with a member having

impermeability to the solvent being arranged on the surface of the fourth region.

5. The manufacturing method for the metal electrode according to Claim 1, wherein

exposure values of the first exposure step and the second exposure step are different from each other, so that the dissolubility of the first layer and the second layer in the development process can be controlled, whereby film thickness of each of the first layer and the second layer is controlled.

6. The manufacturing methods for the metal electrode according to Claims 1 ~~and 2~~, wherein

the first photosensitive substance consists of a mixture of an RuO black pigment, a metal including at least one type of metal selected among Ag, Cr, Cu, Al, Pt, and Ag-Pd, a photosensitive resin, and a solvent, as minimum ingredients, and

the second photosensitive substance consists of a mixture of a metal including at least one type of metal selected among Ag, Cr, Cu, Al, Pt, and Ag-Pd, a photosensitive resin, and a solvent, as minimum ingredients.

7. A manufacturing method for a metal electrode, comprising:

a print step for printing a photosensitive substance that includes a mixture of a metal, a photosensitive resin, and a solvent to form a layer;

a dry step for drying the layer;

an exposure step for exposing the layer in a predetermined pattern;

a development step for developing the layer to reveal an electrode pattern; and

a baking step for baking the revealed electrode pattern to shape the metal electrode,

wherein, in the dry step, the layer is heated so that a flow of the solvent from a region being still wet and a dry region occurs.

8. The manufacturing method for the metal electrode according to Claim 7, wherein

in the dry step, a laser beam is irradiated to a portion which is to become an electrode so as to dry the portion.

9. The manufacturing method for the metal electrode according to Claim 7, wherein

the photosensitive substance consists of a mixture of a metal including at least one type of metal selected among Ag, Cr, Cu, Al, Pt, and Ag-Pd, a photosensitive resin, and a solvent, as minimum ingredients.

10. A manufacturing method for a plasma display panel comprising the manufacturing steps of the metal electrode according to Claim~~s~~ 1~~, 2, and 7~~.